```
          10                  20                  30                  40
MNK PIT PST YVR CLN VGL IRK LSD FID PQE GWK KLA VAI KKP

        50                  60                  70                  80
SGD DRY NQF HIR RFE ALL QTG KSP TSE LLF DWG TTN CTA GDL

     90                 100                 110                 120
VDL LIQ NEF FAP ASL LLP DAV PKT ANT LPS KEA ITV QQK QMP

  130                 140                 150                 160
FCD KDR TLM TPV QNL EQS YMP PDS SSP ENK SLE VSD TRF HSF

170                 180                 190                 200                 210
SFY ELK NVT NNF DER PIS VGG NKM GEG GFG VVY KGY VNN TTV

          220                 230                 240                 250
AVK KLA AMV DIT TEE LKQ QFD QEI KVM AKC QHE NLV ELL GFS

       260                 270                 280                 290
SDG DDL CLV YVY MPN GSL LDR LSC LDG TPP LSW HMR CKI AQG

    300                 310                 320                 330
AAN GIN FLH ENH HIH RDI KSA NIL LDE AFT AKI SDF GLA RAS

  340                 350                 360                 370
EKF AQT VMT SRI VGT TAY MAP EAL RGE ITP KSD IYS FGV VLL

380                 390                 400                 410                 420
EII TGL PAV DEH REP QLL LDI KEE IED EEK TIE DYI DKK MND

          430                 440                 450                 460
ADS TSV EAM YSV ASQ CLH EKK NKR PDI KKV QQL LQE MTA S*
```

FIG. 1.

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```
          10          20          30          40
ATG AAC AAA CCC ATA ACA CCA TCA ACA TAT GTG CGC TGC CTC
 M   N   K   P   I   T   P   S   T   Y   V   R   C   L

      50          60          70          80
AAT GTT GGA CTA ATT AGG AAG CTG TCA GAT TTT ATT GAT CCT
 N   V   G   L   I   R   K   L   S   D   F   I   D   F

    90          100         110         120
CAA GAA GGA TGG AAG AAG TTA GCT GTA GCT ATT AAA AAA CCA
 Q   E   G   W   K   K   L   A   V   A   I   K   K   P

  130         140         150         160
TCT GGT GAT GAT AGA TAC AAT CAG TTT CAC ATA AGG AGA TTT
 S   G   D   D   R   Y   N   Q   F   H   I   R   R   F

170         180         190         200         210
GAA GCA TTA CTT CAA ACT GGA AAA AGT CCC ACT TCT GAA TTA
 E   A   L   L   Q   T   G   K   S   P   T   S   E   L

          220         230         240         250
CTG TTT GAC TGG GGC ACC ACA AAT TGC ACA GCT GGT GAT CTT
 L   F   D   W   G   T   T   N   C   T   A   G   D   L

        260         270         280         290
GTG GAT CTT TTG ATC CAA AAT GAA TTT TTT GCT CCT GCG AGT
 V   D   L   L   I   Q   N   E   F   F   A   P   A   S

    300         310         320         330
CTT TTG CTC CCA GAT GCT GTT CCC AAA ACT GCT AAT ACA CTA
 L   L   L   P   D   A   V   P   K   T   A   N   T   L

  340         350         360         370
CCT TCT AAA GAA GCT ATA ACA GTT CAG CAA AAA CAG ATG CCT
 P   S   K   E   A   I   T   V   Q   Q   K   Q   M   P

380         390         400         410         420
TTC TGT GAC AAA GAC AGG ACA TTG ATG ACA CCT GTG CAG AAT
 F   C   D   K   D   R   T   L   M   T   P   V   Q   N
```

FIG. 2A.

```
          430           440           450           460
CTT GAA CAA AGC TAT ATG CCA CCT GAC TCC TCA AGT CCA GAA
 L   E   Q   S   Y   M   P   P   D   S   S   S   P   E

      470           480           490           500
AAT AAA AGT TTA GAA GTT AGT GAT ACA CGT TTT CAC AGT TTT
 N   K   S   L   E   V   S   D   T   R   F   H   S   F

  510           520           530           540
TCA TTT TAT GAA TTG AAG AAT GTC ACA AAT AAC TTT GAT GAA
 S   F   Y   E   L   K   N   V   T   N   N   F   D   E

  550           560           570           580
CGA CCC ATT TCT GTT GGT GGT AAT AAA ATG GGA GAG GGA GGA
 R   P   I   S   V   G   G   N   K   M   G   E   G   G

590           600           610           620           630
TTT GGA GTT GTA TAT AAA GGC TAC GTA AAT AAC ACA ACT GTG
 F   G   V   V   Y   K   G   Y   V   N   N   T   T   V

          640           650           660           670
GCA GTG AAG AAG CTT GCA GCA ATG GTT GAC ATT ACT ACT GAA
 A   V   K   K   L   A   A   M   V   D   I   T   T   E

      680           690           700           710
GAA CTG AAA CAG CAG TTT GAT CAA GAA ATA AAA GTA ATG GCA
 E   L   K   Q   Q   F   D   Q   E   I   K   V   M   A

  720           730           740           750
AAG TGT CAA CAT GAA AAC TTA GTA GAA CTA CTT GGT TTC TCA
 K   C   Q   H   E   N   L   V   E   L   L   G   F   S

  760           770           780           790
AGT GAT GGA GAT GAC CTC TGC TTA GTA TAT GTT TAC ATG CCT
 S   D   G   D   D   L   D   L   V   Y   V   Y   M   P

800           810           820           830           840
AAT GGT TCA TTG CTA GAC AGA CTC TCT TGC TTG GAT GGT ACT
 N   G   S   L   L   D   R   L   S   C   L   D   G   T
```

FIG. 2B.

```
          850           860           870           880
CCA CCA CTT TCT TGG CAC ATG AGA TGC AAG ATT GCT CAG GGT
 P   P   L   S   W   H   M   R   C   K   I   A   Q   G

        890           900           910           920
GCA GCT AAT GGC ATC AAT TTT CTA CAT GAA AAT CAT CAT ATT
 A   A   N   G   I   N   F   L   H   E   N   H   H   I

    930           940           950           960
CAT AGA GAT ATT AAA AGT GCA AAT ATC TTA CTG GAT GAA GCT
 H   R   D   I   K   S   A   N   I   L   L   D   E   A

  970           980           990          1000
TTT ACT GCT AAA ATA TCT GAC TTT GGC CTT GCA CGG GCT TCT
 F   T   A   K   I   S   D   F   G   L   A   R   A   S

1010       1020          1030          1040          1050
GAG AAG TTT GCC CAG ACA GTC ATG ACT AGC AGA ATT GTG GGA
 E   K   F   A   Q   T   V   M   T   S   R   I   V   G

          1060          1070          1080          1090
ACA ACA GCT TAT ATG GCA CCA GAA GCT TTG CGT GGA GAA ATA
 T   T   A   Y   M   A   P   E   A   L   R   G   E   I

      1100          1110          1120          1130
ACA CCC AAA TCT GAT ATT TAC AGC TTT GGT GTG GTT TTA CTA
 T   P   K   S   D   I   Y   S   F   G   V   V   L   L

   1140          1150          1160          1170
GAA ATA ATA ACT GGA CTT CCA GCT GTG GAT GAA CAC CGT GAA
 E   I   I   T   G   L   P   A   V   D   E   H   R   E

 1180          1190          1200          1210
CCT CAG TTA TTG CTA GAT ATT AAA GAA GAA ATT GAA GAT GAA
 P   Q   L   L   L   D   I   K   E   E   I   E   D   E

1220       1230          1240          1250          1260
GAA AAG ACA ATT GAA GAT TAT ATT GAT AAA AAG ATG AAT GAT
 E   K   T   I   E   D   Y   I   D   K   K   M   N   D
```

FIG. 2C.

```
          1270        1280        1290        1300
GCT GAT TCC ACT TCA GTT GAA GCT ATG TAC TCT GTT GCT AGT
 A   D   S   T   S   V   E   A   M   Y   S   V   A   S

      1310        1320        1330        1340
CAA TGT CTG CAT GAA AAG AAA AAT AAG AGA CCA GAC ATT AAG
 Q   C   L   H   E   K   K   N   K   R   P   D   I   K

   1350        1360        1370        1380
AAG GTT CAA CAG CTG CTG CAA GAG ATG ACA GCT TCT TAA
 K   V   Q   Q   L   L   Q   E   M   T   A   S    *>
```

FIG. 2D.

```
     10            20            30            40
MNK PLT PST YIR NLN VGI LRK LSD FID PQE GWK KLA VAI KKP

  50                  60            70            80
SGD DRY NQF HIR RFE ALL QTG KSP TCE LLF DWG TTN CTV GDL

     90           100           110           120
VDL LVQ IEL FAP ATL LLP DAV PQT VKS LPP REA ATV AQT HGP

  130          140           150           160
CQE KDR TSV MPM PKL EHS CEP PDS SSP DNR SVE SSD TRF HSF

170          180           190           200           210
SFH ELK SIT NNF DEQ PAS AGG NRM GEG GFG VVY KGC VNN TIV

          220           230           240           250
AVK KLG AMV KIS TEE LKQ QFD QEI KVM ATC QHE NLV ELL GFS

       260           270           280           290
SDG DNL CLV YAY MPN GSL LDR LSC LDG TPP LSW HTR CKV AQG

    300           310           320           330
TAN GIR FLH ENH HIH RDI KSA NIL LDK DFT AKI SDF GLA RAS

  340          350           360           370
ARL AQT VMT SRI VGT TAY MAP EAL RGE ITP KSD IYS FGV VLL

380          390           400           410           420
ELI TGL AAV DEN REP QLL LDI KEE IED EEK TIE DYT DEK MSD

          430           440           450           460
ADP ASV EAM YSA ASQ CLH EKK NRR PDI AKV QQL LQE MSA *
```

FIG. 3.

```
            10          20          30          40
GCG GCC GCG TCG ACA TGC CCC GGT GAC CCG CAG CAT CCC GAT

         50          60          70          80
CGC AGG CAG TCT GAA GTC GCC TGG TGG TCC TGC GTC CTC CAC

     90          100         110         120
CCC CGA GTC CTC GCC GGA CGT GGC GGG ACG CCG ATC GCC TTG

  130         140         150         160
TCC AGG AAG CGA GGG ACG TCC GAG AGG AAG TAG AAG ATG AAC
                                          M   N

170         180         190         200         210
AAG CCG TTG ACA CCA TCG ACA TAC ATA CGC AAC CTT AAT GTG
 K   P   L   T   P   S   T   Y   I   R   N   L   N   V

        220         230         240         250
GGG ATC CTT AGG AAG CTG TCG GAT TTT ATT GAT CCT CAA GAA
 G   I   L   R   K   L   S   D   F   I   D   P   Q   E

       260         270         280         290
GGG TGG AAG AAA TTA GCA GTA GCT ATC AAA AAG CCG TCC GGC
 G   W   K   K   L   A   V   A   I   K   K   P   S   G

    300         310         320         330
GAC GAC AGA TAC AAT CAG TTC CAT ATA AGG AGA TTC GAA GCC
 D   D   R   Y   N   Q   F   H   I   R   R   F   E   A

  340         350         360         370
TTA CTT CAG ACC GGG AAG AGC CCC ACC TGT GAA CTG CTG TTT
 L   L   Q   T   G   K   S   P   T   C   E   L   L   F

380         390         400         410         420
GAC TGG GGC ACC ACG AAC TGC ACA GTT GGC GAC CTT GTG GAT
 D   W   G   T   T   N   C   T   V   G   D   L   V   D

        430         440         450         460
CTA CTG GTC CAG ATT GAG CTG TTT GCC CCC GCC ACT CTC CTG
 L   L   V   Q   I   E   L   F   A   P   A   T   L   L
```

FIG. 4A.

```
        470         480         490         500
CTG CCG GAT GCC GTT CCC CAA ACC GTC AAA AGC CTG CCT CCT
 L   P   D   A   V   P   Q   T   V   K   S   L   P   P

    510         520         530         540
AGA GAA GCG GCA ACA GTG GCA CAA ACA CAC GGG CCT TGT CAG
 R   E   A   A   T   V   A   Q   T   H   G   P   C   Q

  550         560         570         580
GAA AAG GAC AGG ACA TCC GTA ATG CCT ATG CCG AAG CTA GAA
 E   K   D   R   T   S   V   M   P   M   P   K   L   E

590         600         610         620         630
CAC AGC TGC GAG CCA CCG GAC TCC TCA AGC CCA GAC AAC AGA
 H   S   C   E   P   P   D   S   S   S   P   D   N   R

          640         650         660         670
AGT GTA GAG TCC AGC GAC ACT CGG TTC CAC AGC TTC TCG TTC
 S   V   E   S   S   D   T   R   F   H   S   F   S   F

        680         690         700         710
CAT GAA CTG AAG AGC ATC ACA AAC AAC TTC GAC GAG CAA CCC
 H   E   L   K   S   I   T   N   N   F   D   E   Q   P

    720         730         740         750
GCG TCT GCC GGT GGC AAC CGG ATG GGA GAG GGG GGA TTT GGA
 A   S   A   G   G   N   R   M   G   E   G   G   F   G

  760         770         780         790
GTG GTG TAC AAG GGC TGT GTG AAC AAC ACC ATC GTG GCG GTG
 V   V   Y   K   G   C   V   N   N   T   I   V   A   V

800         810         820         830         840
AAG AAG CTC GGA GCG ATG GTT GAA ATC AGT ACT GAA GAA CTA
 K   K   L   G   A   M   V   E   I   S   T   E   E   L

          850         860         870         880
AAG CAA CAG TTT GAT CAA GAA ATT AAA GTA ATG GCA ACG TGT
 K   Q   Q   F   D   Q   E   I   K   V   M   A   T   C
```

FIG. 4B.

```
        890           900           910           920
CAG CAC GAG AAC CTG GTG GAG CTG CTC GGC TTC TCC AGC GAC
 Q   H   E   N   L   V   E   L   L   G   F   S   S   D

    930           940           950           960
AGC GAC AAC CTG TGC TTA GTG TAT GCT TAC ATG CCC AAC GGG
 S   D   N   L   C   L   V   Y   A   Y   M   P   N   G

  970           980           990          1000
TCC TTG CTG GAC AGA CTG TCC TGC CTG GAT GGT ACA CCA CCG
 S   L   L   D   R   L   S   C   L   D   G   T   P   P

1010       1020          1030          1040          1050
CTT TCC TGG CAC ACA AGG TGC AAG GTT GCT CAG GGG ACA GCA
 L   S   W   H   T   R   C   K   V   A   Q   G   T   A

          1060          1070          1080          1090
AAT GGC ATC AGG TTT CTG CAT GAA AAT CAT CAC ATT CAT AGA
 N   G   I   R   F   L   H   E   N   H   H   I   H   R

      1100          1110          1120          1130
GAT ATT AAA AGT GCA AAT ATC TTA CTA GAC AAA GAC TTT ACT
 D   I   K   S   A   N   I   L   L   D   K   D   F   T

   1140          1150          1160          1170
GCC AAA ATA TCT GAC TTT GGG CTT GCA CGG GCT TCG GCA AGG
 A   E   I   S   D   F   G   L   A   R   A   S   A   R

 1180          1190          1200          1210
CTA GCG CAG ACG GTC ATG ACC AGC CGA ATC GTG GGC ACA ACG
 L   A   Q   T   V   M   T   S   R   I   V   G   T   T

1220       1230          1240          1250          1260
GCT TAC ATG GCA CCC GAA GCT TTG CGG GGA GAA ATA ACA CCC
 A   Y   M   A   P   E   A   L   R   G   E   I   T   P

          1270          1280          1290          1300
AAA TCT GAC ATC TAC AGC TTC GGC GTG GTT CTG TTG GAG CTG
 K   S   D   I   Y   S   F   G   V   V   L   L   E   L
```

FIG. 4C.

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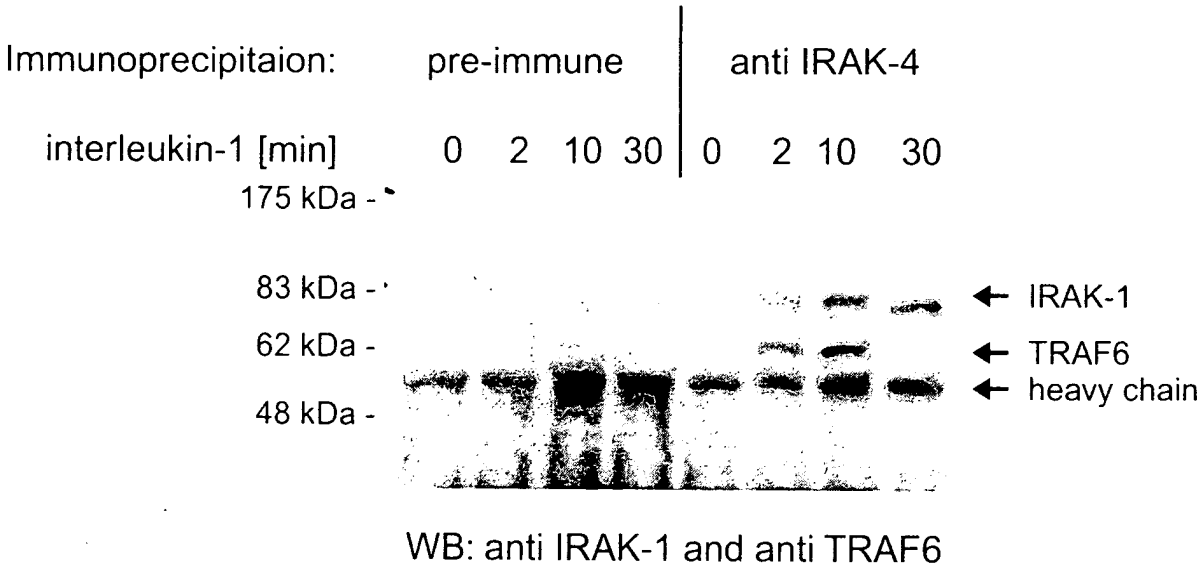
```
      1310          1320          1330          1340
ATA ACC GGG CTG GCG GCT GTG GAT GAA AAC CGT GAA CCT CAA
 I   T   G   L   A   A   V   D   E   N   R   E   P   Q

   1350          1360          1370          1380
CTA CTG CTG GAT ATT AAA GAA GAG ATT GAA GAT GAA GAG AAG
 L   L   L   D   I   K   E   E   I   E   D   E   E   K

 1390          1400          1410          1420
ACG ATT GAA GAT TAC ACG GAT GAG AAG ATG AGC GAT GCG GAC
 T   I   E   D   Y   T   D   E   K   M   S   D   A   D

1430       1440          1450          1460          1470
CCT GCT TCG GTG GAA GCA ATG TAC TCT GCT GCT AGC CAG TGT
 P   A   S   V   E   A   M   Y   S   A   A   S   Q   C

          1480          1490          1500          1510
CTG CAT GAG AAG AAA AAC AGA CGG CCA GAC ATT GCA AAG GTT
 L   H   E   K   K   N   R   R   P   D   I   A   K   V

      1520          1530          1540
CAA CAG CTG CTA CAA GAG ATG TCT GCT TAA
 Q   Q   L   L   Q   E   M   S   A   *>
```

FIG. 4D.



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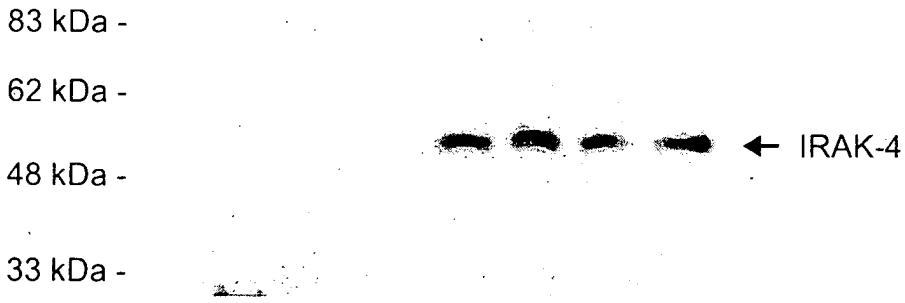

WB: anti IRAK-4

FIG. 5.

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